

Battery test systems and impedance analyzer

The Naval Research Laboratory is seeking a suite of battery test systems and an electrochemical analyzer.

Three battery systems will be procured from the same manufacturer. The systems include a low power system (0 to 5 V) for small pouch and coin cells up to 25 W, the medium power system is for up to 10 V and 50 W, and the high power system is to 50 V and 1000 W. Additionally we seek an electrochemical frequency response analyzer.

Each system should be able to operate on a table top or equipment rack, and come equipped with its own computer with software control, data logging, and relevant analysis software. A single-day training session will be required.

8 Channel Battery Test System – low power batteries

Eight independent test positions

Voltage range 0 to 5 V

Current range: 300 nA(minimum) to 5 A

accuracy: $\pm 0.02\%$ FSR

PC computer/monitor

Interface cables

control software with graphical display

Manufacturer must have manufacturing record of at least 100 model units delivered and in service

1 year warrantee

AC power supply - 110V or 208/220V

4 Channel Battery Test System – medium power

Four independent test positions

Voltage range 0 to 10 V

Current range: 1 μ A(minimum) to 5 A

accuracy: $\pm 0.05\%$ FSR

PC computer/monitor

Interface cables

control software with graphical display

Manufacturer must have manufacturing record of at least 100 model units delivered and in service

1 year warrantee

AC power supply – 110V or 208/220V

2 Channel Battery Test System – high power

Two independent test positions
Voltage range 0 to 50 V
Current range: 100 mA (minimum) - 20 A
accuracy: $\pm 0.05\%$ FSR
16 thermocouple inputs
PC computer/monitor
Interface cables
control software with graphical display
Manufacturer must have manufacturing record of at least 100 model units delivered
and in service
1 year warrantee
AC power supply - 110V or 208/220V

Impedance Analyzer

Frequency Range:	1mHz to 30KHz
AC Impedance Range:	100 μ Ohms to 200 Ohms
Impedance Accuracy:	$\pm 0.1\%$ of reading or $\pm 0.00005\%$ of full scale whichever is the larger
AC SignalAmplitude:	100 μ V to 3V
Maximum Voltage:	55V peak (AC + DC)
Maximum Current:	3000 mA
Connection:	4-terminal Kelvin